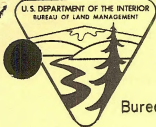


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Interpretive Techniques, Devices and Methods for the BLM Field Use

Interpretation of the natural resources on lands administered by the BLM is relatively new but interpretation itself is not. This note is a brief checklist and thought stimulator to aid BLM people working in the field of interpretation. The material presented here should serve as a launching platform for newer and better innovations.

Interpretation is ideal for the "gadgeteer." The various devices and techniques in present use are only the beginning of what can be done. The fertile creative mind will discover many new ones and combine the old ones into a better interpretation. Remember, though, interpretation is the end product--not the gadget. Bureau of Land Management policies and guidelines in interpretation are found in BLM 6280 Recreation Interpretive Services.

Signs. Probably the most useful, easiest to construct and place, and most popular of all interpretive devices are signs.

a. Wood. Wooden signs can be stained or painted with routed, carved, painted, or cut-out letters. Marine plywood, redwood, and pressed wood (masonite) are standard wood on sign materials. Wood for signs should be easy to work with and take stain and paint easily. Quality outdoor paints and stains are most successful. Silk screen stencils or paper stencils can be used to advantage on painted signs requiring multiple copies of intricate design.

b. Aluminum. Aluminum can be either cast or used in heavy duty sheet form. It is durable, pleasing sign material. Aluminum casts in good detail and is quite versatile for both letters and pictures. Baked on enamels make cast aluminum signs quite colorful and easy to maintain. Aluminum can also be routed and stained or painted to produce a most attractive sign. Although somewhat costly, all aluminum signs reduce vandalism and maintain easily.

c. Bronze. Like aluminum, bronze is easily cast and quite durable, but it is somewhat more expensive than aluminum.

d. Iron. Iron can also be cast but the results are not as pleasing as other metals, for details do not cast sharply. Painted sheet steel signs, if heavy gauge, can be used for interpretive signs, but they are not as esthetically pleasing, versatile, or effective as other materials.

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e. Metal Photo. Medium gauge aluminum sheeting can be coated with a photo sensitized surface and exposed to a negative. By processing, a print of the negative is obtained on the surface which is then coated with a sapphire hard epoxy. Some color can be obtained by using anodized colored aluminum for the background. The process is very versatile and durable. It is especially good for small signs, as portions of large signs, and in outdoor exhibits using old photographs or documents.

f. Concrete. Cast concrete makes excellent signs where fairly large signs are needed, and can be used too for smaller interpretive signs without too much detail. Concrete can be both colored with earth pigments and painted with high-grade concrete paints. Casting requires a mold, greasing the mold, reinforcing with iron bars, careful curing to prevent cracking, and an acid treatment to get rid of surface stains. It is time-consuming and somewhat expensive but makes an eye-catching, effective, long-lasting sign.

g. Plastics. A wide variety of attractive plastic material is available. Plastic without some protection outdoors is not too durable. Laminated plastics of several color layers can be routed to expose underlying layers in a very pleasing sign. Signs are readily available from numerous processors in large cities.

h. Paper. Paper signs can be made somewhat durable but they should be considered mostly as a temporary measure. Paper is inexpensive and versatile, especially if a photographic or other reproduction process is used. For outdoor use, paper signs should be protected. One can use Mylar plastic lamination, a heavy spray of acrylic plastic or place the sign in a weatherproof container. Krylon is a good example of acrylic plastic spray, and "Clear-adheer," produced by the Chicago Desk Company, is one of many adhesive-backed sheet Mylar products for lamination. Some of the new clear fiberglass or heavy plastic laminates preserve paper signs for considerable length of time. Durable colors in inks and photos for outdoor use are almost nonexistent. Lettering can be done easily with LeRoy-type scribes or some of the transfer-type letters.

i. Natural Materials. Interesting and attractive interpretive signs can be made with natural materials. Sandstone slabs can be used with painted lettering to provide signs that are both durable and pleasing. Logs cut to provide a smooth surface are good sign material for painting or routing. Natural materials should also be considered for sign parts, supports, and borders where appropriate. The problem is to keep it within bounds and not be too cute or too gaudy.

Display Exhibits. Flat display panels with words and graphics can be used indoors or out. They offer a wide range of possibilities and can incorporate other devices, both mechanical and static. Most of the techniques in sign making are applicable also. Small museum exhibits can be incorporated in displays. Photographs, drawings, maps, and other graphics are particularly pertinent. Items that do not need preservation or are not irreplaceable or too valuable can be put in the display either in the open or under glass. Action models and self-operated devices can be incorporated in display exhibits. Outdoor displays under glass need a small screened vent to prevent condensation of moisture.

Small display exhibits can be made with a self-closing cover, usually crafted of sheetmetal, over the exhibit. The whole device is mounted on a post or pipe. This type of exhibit device is frequently referred to as an "easel." Roadside display exhibits under shelters are referred to as "wayside exhibits."

Museum Exhibits. Museum exhibits perform two basic functions:

1. Provide interpretation, and
2. Preserve the objects interpreted.

Perishable museum exhibits must be placed in dust-proof, insect-proof, vandal-proof, and deterioration-resistant cases. Cases should be well lighted with ease of viewing for all ages. Most commercially designed and built cases take into consideration modern museum case concepts. Museum exhibits offer a tremendous range of expression for the interpretation of objects. For special problems not covered by commercial cases, one can build or have built for a reasonable price, good cases in any size, shape or form.

Dioramas. As an interpretive device for a museum or outdoor exhibit to reconstruct an activity, an event, or a way of life, dioramas are excellent. They may be miniature or full scale. They are expensive. Scale figures should be made of plastic rather than wax, if they are to withstand heat or dry conditions. Museum exhibit type cases for moisture and insect protection will be required.

Models. Scale models of terrain or man-made objects are not only intriguing to the average visitor but convey ideas very rapidly. Good scale models can be produced at moderate fees and can be weather-proofed or made of durable material for outside display. Small-scale models in connection with historic sites provide an inexpensive method of reconstruction.

Paintings. Like models or dioramas, reconstruction paintings are highly successful. They must be done by artists with the knack of illustration and based on a firm foundation of research. If painted with the proper materials they can be shown outdoors. Paintings frequently need a message with them, either written or audio, to give the full interpretive value.

Flora Exhibits. Plots or gardens of live native and introduced species with interpretation make good interpretive devices when properly cared for. They should be considered only when there is some good means of maintaining them. Herbarium mounts designed for visitor rather than scientific use are ideal for the indoor display of plants at all seasons.

Fauna Exhibits. Exhibits containing live animals are good interpretation, but they should be considered only under special circumstances and where upkeep and care are convenient and guaranteed. Blinds near waterholes and food sources are effective if they can be used by the public without disturbing the wildlife. Lights for night observation, hunting problems and keeping the "chumming" or salting inconspicuous need to be considered.

Sound Movies. There are several ways of presenting sound movies. The standard theater and projection booth operation is excellent but requires an operator, if not on a full time basis, at least available for emergencies. Small, cartridge-operated, self-contained projectors offer a semi-automated service--the user must insert the easily placed cartridge in the machine. Often a commercially produced movie already exists that will do the needed job of interpretation. Movies tell complex stories quickly and graphically.

Sound Reproducers. The tape-operated message repeater type of audio equipment is a most versatile and useful tool. They are compact and run on either DC or AC current. They are automatic, operated by the visitor if need be, and can run either continuously or set to stop themselves. They can be used outside with protection from the elements. The tapes should be recorded in commercial studios where facilities are adequate for making a first-class production, with trained voices and an adequate range of sound reproduction.

Slide Projectors. These come in a wide variety of types and usefulness. Slides come with or without sound or titles. Projectors may be equipped with sound or coupled with a sound reproducer. They can be rigged in cabinets to utilize a mirror and rear screen projection or they can be used in large auditoriums. Some of the cabinets are compact enough to be used on information counters or in exhibits. Most all can be automated. Lap dissolve units can be obtained to provide continuous light intensity on the screen instead of the distracting on-and-off pictures that one gets with a single projector.

Television. TV offers many of the same interpretive opportunities as sound movies, but equipment is more expensive. Closed circuit TV offers opportunities to provide a wider audience the opportunity to see certain happenings they would not otherwise easily see. Such things as demonstrations involving small objects, and wildlife activities where a hidden camera catches the activities that a crowd would disturb are examples. This is a relatively new field with many possibilities for interpretation.

Radio. Short distance transmitters and radio pickup can be used in self-guiding museums and have possibilities for use in self-guided auto tours where the visitor has a radio in his car. They can also be used in auto caravans where the tour leader uses the transmitter and each auto is equipped with a special receiver. Checks must be made with the Federal Communications Commission to ascertain legality of the proposed system.

Sighting Devices. As an aid to interpretation, it is often necessary to use some sort of device to point out distant landmarks and objects of interest. Most sophisticated of these is the coin operated telescope, but simple pipes solidly mounted, pointed in the right direction or cast gunsight-type devices can do the job as well in some situations. The important thing is to describe adequately or inform the visitor what he is looking at and why.

Self-guided Trails. Trails through natural or historical areas that the visitor takes on his own are excellent interpretive devices. The communication can be by means of booklet, small signs, audio devices, exhibits or any combination of these means. Trails offer the visitor a sense of exploration, exercise, and objects in their natural environment.

Publications. A wide variety of formats are available in the printed word. They can range from simple one-page "flyers" to bound books, from mimeograph to color photos. Publications can serve several purposes in addition to providing interpretation; self-guided trail booklets, for instance, serve as souvenirs and usually provide a great deal of basic visitor information.

Personal Services. The human being is still one of the most versatile machines ever conceived. No device or gadget can match it for warmth, quick thinking, store of the right information, ability to adjust to the needs and wants of the visitor, and be so less apt to get out of working order. All of the things mentioned herein should only be considered as aids to the human interpreter. Guided tours and other types of lectures are indispensable interpretive techniques.

Campfire Circles and Outdoor Amphitheatres. These have always been traditional places to present interpretation, particularly in recreation situations involving camping and other outdoor experiences. They can be simple or complex. Most complex are those with electricity, audio-visual facilities and fancy seating.

Visitor Centers. The Visitor Center concept involves not only some interpretation but other needed visitor services that provide the visitor with a quality experience. Included in the building complex are toilets, shelter, information, drinking water, seating, and interpretation. Facilities may range from a fairly simple unmanned open shelter to a highly sophisticated building with lobby, manned information desk, auditorium, museum, flush toilets, etc. The visitor center may or may not be associated with administrative offices.

Off-site Interpretation. In some cases the best means of interpretation is to take it to the public at county fairs, schools, museums, and other similar public places. Many of the above interpretive devices and methods are portable and work just about anywhere--or should with a little imagination.

Interpretive Cost Estimate Guidelines

The following estimates are average costs for the device or the exhibit itself. Planning and installation costs are not included.

Museum exhibit, with museum case	\$2,000 each
Display exhibit, no case	1,500
Wayside exhibit, shelter and exhibit	3,000
Cast aluminum sign, 30" x 40", up to 500 letters	460
Cast bronze sign, as above	520
Routed aluminum sign, 26" x 48"	150
Metal photo sign	.10 per sq.in.
Dioramas	3,000 on up
Topographic models, 4' x 4'	350
Motion picture production (min. \$5,000)	1,200 per min.
Sound/slide film, professional script writer and/or professional art or photo work	1,500 up
Captioned slides, 30 or more, plus 4 duplicate sets	175
Taped audio only with professional voice	200

Audio-Visual Equipment

8 mm movie projectors, sound small rear screen w/continuous loop in cabinet	150 up 150 up
16 mm movie projectors, sound in large rear projection screen cabinet	650 & up 1,000 & up
35 mm slide projector, automatic in small cabinet, rear screen projection	200 & up 450 & up
Message repeaters, cassette type, small in outdoor weather-proof facility w/spare	100 & up 500
TV cameras, monochrome, closed circuit	400 & up
TV receivers, monochrome, commercial	200 & up

Note: Audio-visual Equipment Directory should be checked because of the wide variety of equipment available and constantly changing prices. In most cases two pieces of equipment should be considered so as to have an immediate spare on hand in case of equipment failure.

Bibliography

- The Audio-Visual Equipment Directory, by National Audio-Visual Association, Inc., 3150 Spring Street, Fairfax, Virginia 22030. (Published yearly at \$8.50)
- Developing the Self-Guiding Trail in the National Forests, by U. S. Department of Agriculture, Forest Service Miscellaneous Publication 968, Washington, D. C. 20250. 20 cents.
- Directory of Interpretive Materials, by G. W. Sharpe and R. K. Searles, The Association of Interpretive Naturalists, c/o School of Natural Resources, University of Michigan, Ann Arbor, Michigan 48104. \$1.00
- Directory of Nontheatrical Film Producers and Distributors, Eastman Kodak, Rochester, N. Y. 14650. Free.
- Help! For the Small Museum, by Arminta Neal, Pruett Press, Boulder, Colorado. \$7.50
- Interpretation, A Manual and Survey on Establishing a Naturalistic Program, by H. E. Wallin, Management Aid No. 22, American Institute of Park Executives, 1963, Oglebay Park, Wheeling, West Virginia. \$1.00.
- Interpreting Our Heritage, by Freeman Tilden, University of North Carolina Press, Chapel Hill, N. C. \$1.65 (paperbound)
- Manual of Outdoor Conservation Education, by J. J. Shomon, National Audubon Society. \$2.00.
- Trail Planning and Layout, by B. L. Ashbaugh, National Audubon Society. \$2.50.
- Manual of Outdoor Interpretation, by J. J. Shomon, National Audubon Society, 1130 Fifth Ave., New York, N. Y. 10028. \$3.00
- Museum Suppliers Registry, American Association of Museums, 2306 Massachusetts Ave., N. W., Washington, D. C. 20008. \$5.00.
- Planning a Nature Center, by B. L. Ashbaugh, National Audubon Society. \$2.00.

Federal Agency Sources of Supply

Signs: Yosemite Sign Shop, Yosemite National Park, California
(Produces routed plastic and routed aluminum signs)

Air Force Field Printing Plant, Defense Printing Ogden,
Ogden, Utah 84401 (Metal photo and Scotch Call signs)

District of Columbia Reformatory, Bureau of Prisons, Lorton,
Virginia. (Cast aluminum signs with text only)

BIM Sign Shops, Rawlins and Kingman (Routed wood signs)

Publications and Printing Service, Puget Sound Naval
Shipyards, Bremerton, Washington 98314. (Metal photo signs)

Exhibits: Harpers Ferry Interpretive Center, U. S. National Park Service,
Harpers Ferry, Virginia (Museum and display exhibits)